

### REMARKS

Claims 1- 52 are pending. Claims 2, 7, 10, 22, 27 and 30 have been amended, and no claims have been newly added. Reconsideration is respectfully requested.

The invention is directed to a reading and spelling skill training system and method wherein the system has one or more different games which train various skills of the user, such as phonological skills and then sound/symbol correspondence, of the user. The system combines various different types of training (as set forth in the claims of the application) which train the user's reading and spelling skills.

### PRIOR ART REJECTIONS

In response to the Examiner's rejection of Claims 1-4, 6 - 8, 10, 11, 13-16, 21-24, 26-28, 30, 31 and 33-36 under 35 USC 103(a) as being unpatentable over by U.S. Patent No. 6,190,173 to Jenkins et al. (hereinafter "Jenkins '173") in view of U.S. Patent No. 6,019,607 to Jenkins et al. (hereinafter "Jenkins '607"), the rejection of Claims 2, 5, 22 and 25 under 35 USC 103(a) as being unpatentable over Jenkins '173 in view of U.S. Patent No. 4,884,972 to Gasper (hereinafter "Gasper"), the rejection of Claims 17-19, 37-39, 45 and 49 under 35 USC 103(a) as being unpatentable over Jenkins '173 in view of U.S. Patent No. 5,456,607 to Antoniak (hereinafter "Antoniak"), the rejection of Claims 20 and 40 -44 under 35 USC 103(a) as being unpatentable over Jenkins '173 in view of U.S. Patent No. 5,596,698 to Morgan (hereinafter "Morgan") and the rejection of Claims 46-48 and 50-52 under 35 USC 103(a) as being unpatentable over Jenkins '173 in view of Antoniak and further in view of U.S. Patent No. 6,134,529 to Rothenberg (hereinafter "Rothenberg"), Applicant respectfully traverses these rejections. In particular, the prior art cited by the Examiner does not render obvious the claims of this application for the reasons set forth below. Therefore, the claims of this application are allowable over the prior art cited by the Examiner and early allowance of the application is respectfully requested.

#### Prior Art Summary

##### Jenkins '173

Jenkins '173 describes a method and apparatus for training of auditory/visual discrimination using target and distractor phonemes/graphics. (See Title and Abstract). Jenkins '173 further describes that, as set forth in Col. 9, Ins. 18 - 41, that a grapheme may be used to illustrate a particular phoneme to be tested. Jenkins '173 further describes that a grapheme is presented (See

Figure 10) wherein the particular consonant that is being tested is highlighted in a color different from the other letters in the phoneme. See Col. 9, Ins. 26 – 29. An example of this is described at Col. 9, Ins. 29 – 33. Jenkins '173 also describes that an aural presentation of the phoneme represented by the grapheme is played to the student. See Col. 9, Ins. 33- 36. In the game described in Jenkins, the grapheme is presented as part of the phoneme discrimination training process as set forth above. The game in Jenkins '173 thus uses the grapheme to aid the training of the phoneme. Jenkins '173 does not first train a user's phonological skills (phoneme recognition) and then transition to sound/symbol awareness training since the graphemes in Jenkins '173 are merely used as part of the phonological training and the user is not required to identify the sound/symbol correspondence.

The Examiner cited to Col. 9, Ins. 18 – 32 for support that Jenkins '173 discloses morphological skill training of the user. However, that portion merely describes the phonological training using phonemes and graphemes as described above. Jenkins '173 does describe a game (See Col. 11, ln. 46 – Col. 12, ln. 3) wherein an auditory target word (phoneme) is presented to the user wherein a grapheme is again used as part of the phonological training in which phonemes are identified.

#### Jenkins '607

Jenkins '607 is directed to a method and apparatus for training of sensory and perceptual systems in LLI systems (See Title.) The system, through adaptive control and repetition of processed speech elements and presentation of speech elements in a creative fashion, improves a subject's temporal processing of acoustic events (See Abstract.) Jenkins '607 describes a game called Phonic Match in which, for similar words, a user must recall which picture is associated with which word and select pictures that present the same word. (See Col. 20, lines 18-25.)

#### Gaspar

Gaspar describes speech synchronized animation in which an animated character pronounces a word. In particular, a user may select a tile and, as the tile is selected, the animated character pronounces the name and sound of the letter inscribed on the tile. When words are formed, the animated character pronounces the words of the sound of the character combinations formed (See Abstract.) In essence, Gaspar describes a sounding machine which pronounces the characters or words formed by the user.

#### Antoniak

Antoniak describes a knowledge testing computer game wherein the game tests a user's understanding of factual materials wherein the user moves visual objects on a screen. In more detail, the game has a "Ranking" play in which the player is asked to place the objects into a particular order based on a characteristic, such as magnitude (See Col. 5, lines 24 – 32.)

#### Rothenberg

Rothenberg is a speech recognition apparatus and method for learning (See Title) that uses a discrete speech recognition engine ("DSRE"). The DSRE is a computer program that accepts a sample digitized speech waveform, X, and compares it to a preset number of N waveforms (See Col. 2, lines 28 – 48.) The system may present a question about an item of the screen ("Which item is a fruit?") and receive a verbal response (See Col. 8, lines 31- 40.)

#### Morgan

Morgan describes a method and apparatus for recognizing handwritten inputs for a computerized teaching system. (See Title.) Morgan does describe that the product can enhance learning for students with disabilities and that the product can be programmed for special lessons on dyslexia and reversals... (See Col. 5, lns. 2- 9 ) Morgan may, for example, help a student with dyslexia to write properly in that it will correct the student's reversed letters.

#### Arguments

##### Claims 1 and 21 and dependent claims

Jenkins '173 and Jenkins '607, in combination, do not render Claims 1 and 21 obvious. In particular, the Examiner has not set forth a prima facie case of obviousness since the Examiner has not provided an explanation why one of ordinary skill in the art at the time of the invention was made would have been motivated to make the combination of Jenkins '173 and Jenkins '607. The Examiner must point out 1) the suggestion or teaching; and 2) the reasonable expectation of success which must be found in the prior art and not based on Applicant's disclosure. See MPEP 706.02(j). Applicant does not believe that these two elements can be met and in fact are not met in the current rejection.

The Examiner points to Jenkins '173 for support of a phonological awareness skill training, but admits that Jenkins '173 does not show the transition to training sound/symbol skills. The Examiner asserts that Jenkins '607 shows training sound/symbol skills. The Examiner relies on the Abstract in Jenkins '607 for support of his assertion. The Abstract describes that the system. "through adaptive control and repetition of processed speech elements,

and presentation of speech elements in a creative fashion, a subject's temporal processing of acoustic events ... are significantly improved." The Abstract does not describe training sound/symbol skills as recited in the claims. It describes the presentation of speech elements which appears to be audible presentation of speech elements and certainly does not describe the training of sound/symbol skills.

Jenkins '607 does describe different games in which sound/symbol skills are trained and the user must identify a picture associated with a sound. However, even if Jenkins '607 describes training sound/symbol skills, neither reference describes a motivation to combine the two patents. The Examiner appears to rely on the "in a creative fashion" language in the abstract of the '607 Patent for support that the presentation of sound/symbol skill training of Jenkins '607 after the phonological training of Jenkins '173 is "well within the concept of creative presentation of the two types of speech training." The Jenkins '607 patent, in fact, describes various games and training, but does not describe or suggest training of phonological skills and then transitioning to sound/symbol training as set forth in the claims. The "creative presentation" of the training in Jenkins '607 must encompass the various training games described in Jenkins '607 (see the games described at Col. 8, lines 45 – 49.) and not the claimed transition between phonological skill training to sound/symbol skill training as claimed. It also does not describe the motivation to combine Jenkins '173 with Jenkins '607 as suggested by the Examiner. It is unclear how a statement about the "creative presentation" of Jenkins '607 would provide a person with ordinary skill in the art with the motivation to combine Jenkins '173 and Jenkins '607 so that the claimed game trains the phonological skills of the user and then transitions to training the sound/symbol correspondence skills once the phonological skills are mastered as recited in Claims 1 and 21. Therefore, the motivation to combine Jenkins '173 and Jenkins '607 is not present and the Examiner has failed to establish a prima facie case of obviousness as required by the MPEP. Therefore, Claims 1 and 21 are allowable over Jenkins.

The claims which depend from Claims 1 and 21 are allowable over the prior art cited by the Examiner for at least the same reasons as Claims 1 and 21.

#### Claims 2 and 22

Applicant has rewritten dependent Claim 2 in independent form. The scope of Claim 2 has not changed as a result of this amendment. Claim 2 has the features of Claim 1 with the additional feature of "a morphological skills training portion to train the user's skills at decoding

a word and vocabulary.” The Examiner has rejected this claim over Jenkins ‘173 in view of Gasper (page 5 of the Office action.) The rejection, however, is improper. In particular, Claim 1 was rejected based on Jenkins ‘173 in view of Jenkins ‘607, but Claim 2 (which has the same features as Claim 1) was only rejected on the basis of Jenkins ‘173 in view of Gasper and was not rejected based on Jenkins ‘173 in view of Jenkins ‘607 and further in view of Gasper as would have been proper given the rejection of Claim 1. Jenkins ‘173 does not disclose the sound/symbol skill training (as admitted by the Examiner) and therefore Jenkins ‘173 in view of Gasper cannot describe the claimed sound/symbol skill training either.

If it is assumed that the Examiner meant to reject this claim based on the combination of Jenkins ‘173 in view of Jenkins ‘607 and further in view of Gasper, the combination of Jenkins ‘173, Jenkins ‘607 and Gasper does not suggest the claimed invention as recited in Claim 2. In particular, 1) Jenkins ‘173, Jenkins ‘607 and Gasper do not teach the “symbol/sound training” as set forth above for Claim 1; and 2) Jenkins ‘173, Jenkins ‘607 and Gasper do not describe the claimed “morphological skills training portion” set forth in Claim 2. Jenkins ‘173 and Jenkins ‘607 do not describe this feature as admitted by the Examiner. In addition, Gasper is a system in which an animated character will pronounce a word or character of the tile(s) selected by a user. Gasper will train a learner’s memory, but does not describe or teach the claimed morphological skill training which is an awareness and an ability to manipulate compound words, root words, etc..) At most, the Gasper system is a sound pronunciation tool which would help a user to hear the sounds of characters or words, but does not actually train morphological skills as the combination of games of the claimed invention do by presenting the user with tasks which actually train the morphological skills. Furthermore, the motivation to combine Jenkins ‘173 with Gasper has not been described by the Examiner. Therefore, Claims 2 and 22 are allowable over the prior art.

#### Claims 5 and 25

Claims 5 and 25 are allowable for at least the same reasons as Claims 1 and 21 above. In addition, Jenkins ‘173 and Gasper cannot teach all of the limitations of Claim 1 since Jenkins ‘173 does not disclose the sound/symbol skill training (as admitted by the Examiner) and therefore Jenkins ‘173 in view of Gasper cannot describe the claimed sound/symbol skill training either which is recited in Claims 5 and 25.

Furthermore, Claims 5 and 25 recite “wherein the one or more modules further comprise a segmentation, discrimination and syllable stress training module, a segmentation, blending, decoding and spelling training module, a sound/symbol correspondence training module and a sound and word recognition training module.” Jenkins ‘173 does not disclose the combination of modules recited in the claim as admitted by the Examiner and does not disclose the sound/symbol correspondence training module. Further, Gasper does not disclose a morphological skill training as suggested by the Examiner. As explained above, Gasper describes a system in which an animated character pronounces words or characters selected by a user and does not describe the morphological skill training (provided by the various games described in the specification) as suggested by the Examiner. Therefore, Claims 5 and 25 are allowable over the prior art cited by the Examiner.

#### Claims 6 and 26

Claims 6 and 26 recite “means for providing a cue to the user, wherein the cues are auditory cues first, then auditory and visual cues and then visual cues” or the corresponding method steps. These claims are allowable for at least the same reasons as Claims 1 and 21 above. Furthermore, these features of the invention are not suggested by the combination of Jenkins ‘173 and Jenkins ‘607. The Examiner cites to Col. 9, lines 19 – 36 of Jenkins ‘173 in which it is described that a grapheme is provided to illustrate a particular phoneme being tested and then an aural presentation of the phoneme represented by the grapheme is played. It is true that Jenkins ‘173 offers cues, however, Jenkins ‘173 does not suggest the claimed cues wherein the cues are auditory cues first, then auditory and visual cues and then visual cues. Thus, these claims recite a particular combination of cues which are presented in a particular order to the user (to change the difficulty of the training) whereas Jenkins ‘173 simply describes that cues may be used. Therefore, Claims 6 and 26 are allowable over the prior art.

#### Claims 7, 8, 9, 27, 28 and 29

Claims 7 and 27 have been rewritten in independent form. The amendments to Claims 7 and 27 did not change the scope of these claims as the language from its corresponding independent claim was inserted into the dependent claim and the claim language was clarified. These claims are allowable over the prior art for at least the same reasons as Claims 1 and 21 above. Further, these claims recite “adaptively increasing or decreasing the difficulty of the training of the user based on user performance.” (See for example, the description of Figure 16

for the increasing or decreasing of the difficulty of training.) Jenkins '173 discloses adaptive training in which the level of difficulty of the user is increased as the user becomes more proficient so that, for example, the amount of processing to the phoneme is reduced (See Col. 8, lines 43 – 57.) However, Jenkins '173 does not disclose or suggest that the training difficulty is either increased or decreased based on user performance as recited in these claims. The Examiner has asserted that it is obvious to increase/decrease the difficulty level based on Jenkins '173 that merely describes increasing a level during a training. However, the claimed increase/decrease of the difficulty of the training permits the training to adjust to the user's skills (whether it is necessary to increase or decrease the difficulty during each game) whereas the Jenkins '173 system only increases the difficulty and could not, for example, adjust for a user who has progressed to some level of proficiency, but must then move back down in proficiency level since the proficiency was lost. Thus, the claimed adaptive training is different from the training provided by Jenkins '173. Therefore, Claims 7 and 27 are allowable over the prior art. Furthermore, Claims 8 and 28 are allowable over the prior art for at least the same reasons as Claims 7 and 27 above. Claims 9 and 29 recite more details of the claimed adaptive training (including predetermined increase level criteria and predetermined decrease level criteria) which are not suggested by the prior art.

Claims 10, 11, 30 and 31

Claims 10 and 30 have been rewritten in independent form. The amendments to Claims 10 and 30 did not change the scope of these claims as the language from its corresponding independent claim was inserted into the dependent claim. These claims are allowable for at least the same reasons as set forth above for Claims 1 and 21 since these claims contain the elements set forth in Claims 1 and 21, respectively. Furthermore, Claims 10 and 30 recite “wherein the game is stored on a server computer and downloaded to a client computer and wherein the user input device and the graphical display are part of a client computer connected to the server computer by a computer network.” The Examiner cites Jenkins '173 as disclosing this feature of the claimed invention. However, the portion cited by the Examiner (Col. 5, lines 26 – 49) describes that the Jenkins system permits information such as test scores, game statistics and other subject information to flow from a subject's computer 202, 204 to a server (See Col. 5, lines 36 – 39.) Jenkins further describes that computers 202, 204 are connected to a server and that each computer 202, 204 contains the computer program to train a user (See Col. 5, lines 6 –

9.) Thus, it is clear that each individual computer (such as computer 100 in Figure 1 or computers 202, 204 in Figure 2) contains the training program while the computer network permits data from the training to be sent to the server so that the information may be reviewed by an administrator (See Col. 5, lines 39 – 42.) Therefore, the server of Jenkins ‘173 does not store the training program and games are not downloaded to the client computers as claimed.

Therefore, Claims 10 and 30 are allowable over the prior art. Further, Claims 11 and 31 recite “wherein the server further comprises means for downloading changes to the game from the server computer to the client computer.” At most, Jenkins ‘173 describes that configuration and control information for a particular user may be downloaded to the subject’s computer 202, 204.

This configuration and control information may adjust the levels of the games on the computer 202, 204 (which are clearly always stored on the computers 202, 204), but are not changes to the downloaded games from the server computer since Jenkins ‘173 clearly does not describe or suggest that the games are stored on the server computer and then downloaded to each client. Therefore, Claims 11 and 31 are allowable.

#### Claims 13 and 33

Furthermore, Claims 13 and 33 recite a diagnostic tool for testing the skills of the user in order to customize the game for a particular user and means for downloading the customized game from the server computer to the client computer of the particular user. Jenkins describes a CD product wherein an administrator may review test results and download configuration and control information to the student. See Col. 5, lns. 39 –42. In contrast to an administrator having to review the game results and download information to the student, the claimed invention automatically tests the skills of the user using the diagnostic tool and then downloads the customized games from the server computer to each client computer. As described above, the games in Jenkins ‘173 are not downloaded from the server computer. Therefore, Claims 13 and 33 are not anticipated by Jenkins ‘173.

#### Claims 17- 20 and 37- 40

Claims 17- 20 and 37- 40 are allowed over the prior art cited by the Examiner for at least the same reasons as independent Claim 1 and 21 above. Furthermore, Jenkins and Antoniak do not teach “wherein the module further comprises a task in which the user sorts words into one or more categories in order to identify patterns in printed words” as recited in Claims 17 and 37. In particular, Jenkins ‘173 describes a phoneme identification and discrimination training tool



wherein the user must select a particular phoneme. For example, the portion cited by the Examiner (Col. 8, lines 43 – 57) describes that a user must distinguish between similarly sound phonemes. The phoneme training of Jenkins '173 does not require the user to sort words into one or more categories to identify patterns in printed words as claimed. Antoniak also does not teach the claimed sorting task. As described above, Antoniak teaches a ranking game in which a user must move objects on a screen based on a question presented to the user. Antoniak does require the user to identify the words in the objects which must be ranked, but does not require the user to identify patterns in words and sort the words into different categories based on the patterns in the words. Therefore, Claims 17 and 37 are allowable. Claims 18- 20 and 38- 40 are allowable for at least the same reasons as Claim 17 and recite further features of the sorting task that are not taught by the prior art.

Claims 41 and 43 and dependent claims

Jenkins and Morgan, alone or in combination, do not disclose or suggest the invention recited in Claims 41 and 43 and the dependent claims. In particular, the combination of elements recited in these claims are not disclosed or suggested by the prior art cited by the Examiner as set forth below in more detail. In addition, the Examiner has not set forth a prima facie case of obviousness since the Examiner has not provided an explanation why one of ordinary skill in the art at the time of the invention was made would have been motivated to make the combination of Jenkins and Morgan. The Examiner must point out 1) the suggestion or teaching; and 2) the reasonable expectation of success which must be found in the prior art and not based on Applicant's disclosure. See MPEP 706.02(j). Applicant does not believe that these two elements can be met and in fact are not met in the current rejection.

Furthermore, Jenkins and Morgan do not suggest the invention recited in these claims. In particular, the claims require visually presenting a target word to the user for a predetermined time and visually presenting a series of words to the user after the target word is removed. This combination of elements trains a user's short term memory skills since the target word is presented and then the series of words are presented after the target word is removed. Neither Jenkins nor Morgan teaches or suggests this training of the short term memory of the user in the manner recited in these claims.

The claims further recite prompting the user to identify the word in the series of words whose letters are in reverse order to the target word. Neither Jenkins or Morgan discloses or suggests that user identifies a word whose letters are reversed. The Examiner has admitted that Jenkins does not disclose this feature. The Examiner points to Morgan for the disclosure of this element of the claim. However, Morgan is a handwriting system wherein the system may correct the improper letter order of a student with dyslexia. However, Morgan does not teach or suggest the training set forth in Claims 41 and 43 and there is no suggestion to combine the two references. Therefore, Claims 41 and 43 are allowable over Jenkins and Morgan.

Claims 45 and 49 and dependent claims

Jenkins and Siegel, alone or in combination, do not disclose or suggest the invention recited in Claims 45 and 49 and the dependent claims. In particular, the combination of elements recited in these claims are not disclosed or suggested by the prior art cited by the Examiner as set forth below in more detail. In addition, the Examiner has not set forth a prima facie case of obviousness since the Examiner has not provided an explanation why one of ordinary skill in the art at the time of the invention was made would have been motivated to make the combination of Jenkins and Siegel. The Examiner must point out 1) the suggestion or teaching; and 2) the reasonable expectation of success which must be found in the prior art and not based on Applicant's disclosure. See MPEP 706.02(j). Applicant does not believe that these two elements can be met and in fact are not met in the current rejection.

Furthermore, Jenkins and Siegel do not suggest the invention recited in these claims. In particular, the claims recite visually presenting one or more words to the user, visually presenting one or more categories into which the word is sorted by the user, and prompting the user to sort the one or more words into the one or more categories to improve the user's skills at recognizing patterns in words. The Examiner admits that Jenkins does not describe the claimed invention. Siegel also does not describe or suggest that sorting game. Siegel describes that its dictionary type function may be used with a game, but does not describe the claimed sorting task recited in the claims. Siegel describes that its phonic engine (a dictionary) may be used with a mechanical sorting mechanism to form part of a game, but certainly does not describe what type of game nor the operation of that game. Siegel does not however, suggest the claimed invention since it does not describe the sorting of words into categories as recited in the claims. Therefore, Jenkins and Siegel does not disclose the invention nor is there any suggestion to combine Jenkins and Siegel.

Therefore, Claims 45 and 49 are allowable over the prior art. The dependent claims are also allowable over the prior art for at least the same reasons as the independent claims.

CONCLUSION

In view of the above arguments, it is respectfully submitted that Claims 1-52 are allowable over the prior art cited by the Examiner for the reasons set forth above and early allowance of the application is respectfully requested.

The Commissioner is hereby authorized to charge any additional fees or credit any overpayment to Deposit Account No. 07-1896. The Examiner is invited to contact Applicant's Attorney at (650) 320-7426 if there are any questions or if the Examiner feels that a telephone conference will speed the prosecution of this application.

Respectfully submitted,

GRAY CARY WARE & FREIDENRICH LLP

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By



Timothy W. Lohse  
Attorney for Applicant  
Reg. No. 35,255

GRAY CARY WARE & FREIDENRICH LLP  
Attn: Patent Department  
1755 Embarcadero Road  
Palo Alto, CA 94303  
Telephone: (650) 320-7426